

[Name of the document] Abstract

[Abstract]

[Object] To prolong the life of a shell type needle roller bearing used e.g. for a support structure for a compressor spindle or for a support structure for a piston pump driving portion, and to lower the acoustic level during use.

[Means for solution] A shell type outer ring 2 of a shell type needle roller bearing 1 is formed by a pressing combined with an ironing step, and the lubricating conditions in this ironing step on the outer-diameter ironed surface, which becomes the outer-diameter surface of the outer ring 2, are in a substantially fluid lubricating state so as to restrict the circumferential surface roughness of the inner-diameter surface, the inner-diameter roundness, and the amount of uneven thickness of the tubular portion to predetermined value ranges, thereby prolonging the life of the shell type needle roller bearing and lowering the acoustic level during use.

[Selected view] Fig. 1